



LE CORBUSIER

and the Continual Revolution in Architecture

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47. Design for a *Meuble-Secrétaire*, desk for his parents' house, 1915 (BV). A Revivalist style disciplined by geometry. Geometrical design was the main subject Jeanneret taught in the New Section. The heavy front leg carries a tilt-out section, a curious functional expression crossed with the Biedermeier aesthetic. The *secrétaire* is now in the house that Le Corbusier designed for his mother on Lake Geneva.



48. Project for the Paul Ditisheim Building, La Chaux-de-Fonds, 1913 (BV). Three-bay industrial Classicism on the American commercial model. Paired pilasters, below, enclose two floors of selling space, while the neutral wall, above, holds the watch factory. Bi-axial symmetry remained a constant theme of Le Corbusier, although he usually modified it with secondary asymmetries.

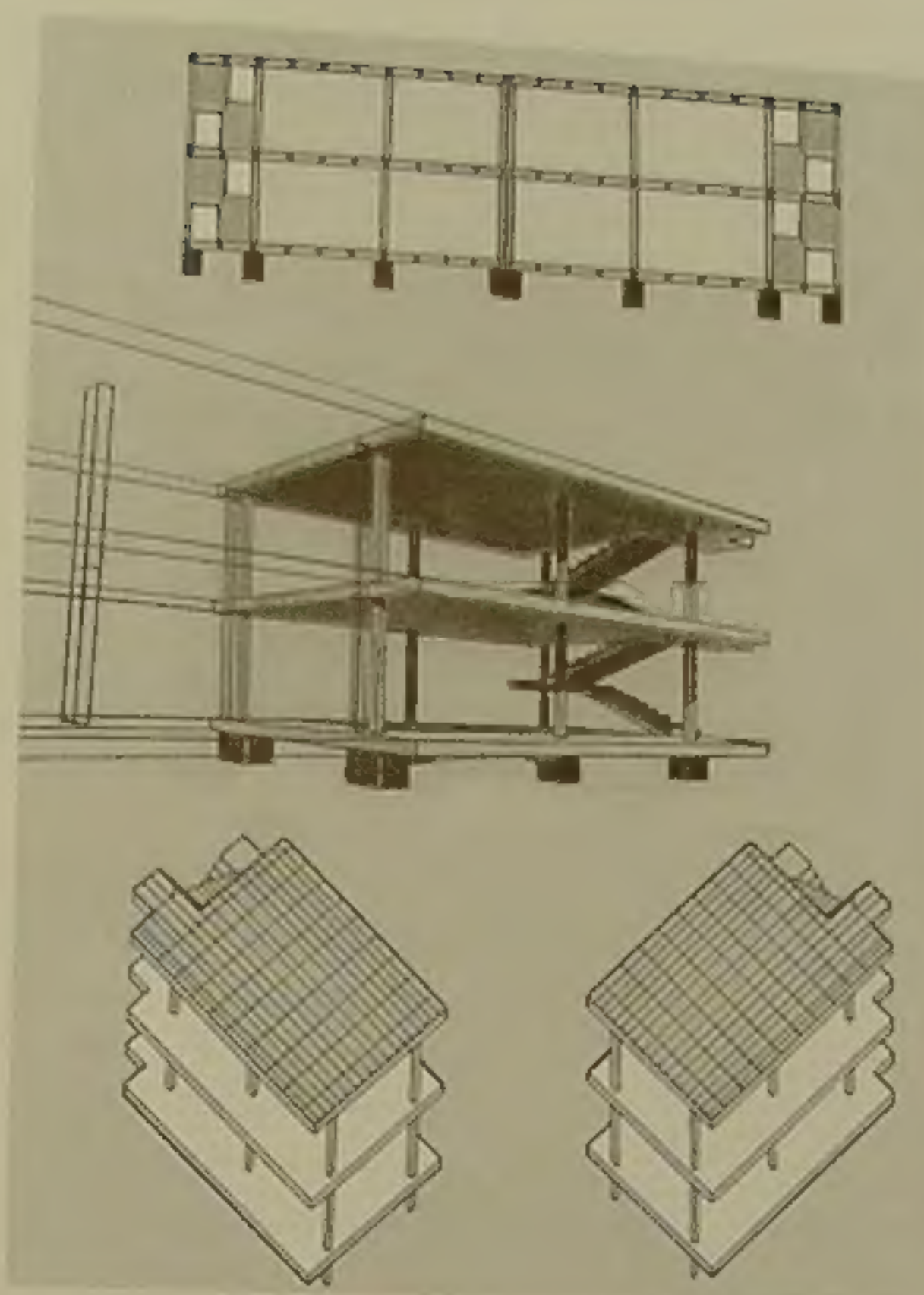
cage that Jeanneret had learned from Perret. The way space and architectural forms continue to slide around corners and over obstacles recalls the ideas of Frank Lloyd Wright, whose work Jeanneret was beginning to study. And then there is ornament, although very restrained, on the edges, columns, and transition points, that recalls Edouard's longstanding commitment to inventing a Jura language. Many architects in this century have built their first house for their parents, and if one is going to send them to the poorhouse doing so, then at least Jeanneret makes a fine job of it.

Yet the synthesis was not altogether secure, and many inner doubts remained. This can be seen in the lighting fixtures, draperies, French doors, wallpaper, and rugs for the house. If we consider the building as a total work of art, as Edouard would have done, then it has problems of integration. The most convincing parts of the design are the inventive but revivalist furniture which Jeanneret was designing at the time and in the specifications for "Louis XIII" and "Directoire" furniture in his buildings [fig. 47].

When Le Corbusier was later to proclaim, dogmatically, "The 'Styles' are a lie," he was speaking with authority. By 1915, he had already mastered several of them, including the Greek, Italian Renaissance, Louis XIV, XV, and XVI, Biedermeier, and Beaux-Arts Classicism—not to mention all the medieval styles he was then rejecting. Jeanneret's favorites at the time were what Frank Lloyd Wright called "stripped or deflowered classicism," a purgative form of design on its way to minimalism. One of the more ornamented was his design for a watch factory, a cross between a Renaissance palazzo and an industrial building in reinforced concrete, with factory windows [48].

Le Corbusier, as the archetypal Modernist in the tradition of the unappreciated genius, often gives the impression that he was disregarded by society and the power structure, whereas the truth is more interesting than that, as his next commission shows. It was for a self-made industrialist, Georges Favre-Jacot, the sixty-nine-year-old semiretired founder of the Zenith Watch Company, and located in Le Locle, a town next to La Chaux-de-Fonds. It is a grand Italian villa, but very much in the white Jura Classicism that Cingria-Vaneyre had proposed as an appropriate response for the area, and it looks over the valley from where the entrepreneur could see his factory and his six hundred workers churning out 100,000 watches per year.

52. Dom-ino skeleton, 1914-15, redrawn. Called the extensible system because like a domino block it could be added to at the ends or at right angles, thus generating U-shaped urban blocks. Only four elements form a universal system mass-produced on site: footings, square pier, flat slab of hollow tiles, and stairs. Such archetypal drawings created the Doric Order of Modernism, and their logic led to the new International Style: long cantilevered floors, ribbon windows, and flat roofs in a smooth, homogeneous, white aesthetic. This led in the 1990s to the dream of a supermaterial, ultra-plastic, the Ultimate Cardboard Model, the dream of many architects that one universal system would do for everything. The cantilever from the six columns makes structural sense because it balances with the internal stresses, and it leads directly to shallow, layered transparency, what Colin Rowe and others see as quintessentially Modern space. The problems with all the smoothness, the flush columns and flat slab, are the increased cost and weight.



cannot have a new architecture every Monday morning," then the Dom-ino system has to be understood as the last great structural principle of Modernism. It dominated practice until Post-Modern nonlinear structures came on the scene, in the 1990s, and they still have a long way to go before they challenge the repetitive box. Jeanneret did not entirely invent the system. He modified ideas from Perret, his engineering friend Max Du Bois (whom he forgot to credit), reinforced-concrete systems already on the market (such as that of Hennebique), and the visual system of Chicago skyscrapers.

As Colin Rowe has argued, the Chicago frame plus Dom-ino equals Modernism. It is the two-way neutrality of the former, the cagelike expression of the inside structure on the outside skin, which becomes the dominant idea for Le Corbusier's major competitor in Modernism—Mies. The two together made the right angle and the dumb box into the most terrifying cliché ever



56, 57. Drawings of interiors, n.d. (BV) Like the organization of his parents' house, these interiors develop the theme of a central aedicule marked off by a strong symmetrical structure. The size of the space is greatly exaggerated, as in many perspectives, and a freestyle Classical discipline is played in counterpoint to the incidents of furniture and painting.

design, and stripped Classicism into a total service [fig. 56, 57]. This did allow him many trips to Paris to buy furnishing for his clients, the haute bourgeoisie of La Chaux-de-Fonds. As he said in letters to Ritter, this provincial clientele drove him to distraction, with its pettiness and lack of commissions worthy of his talent. They were not building a Colosseum or an Acropolis. Thus when a developer, Edmond Meyer, planned a cinema and variety theater for the town, Jeanneret leapt at the opportunity.

His old partner in architecture, René Chapallaz, who had overseen his early villas, actually had the commission already, and designed plans and elevations. But that did not stop Jeanneret from entering the fray. On June 20, 1916, he took the plans that Chapallaz had submitted the day before, redrew them ever so slightly, keeping essential elements such as a reinforced-concrete balcony of seven meters. As Allen Brooks has argued, the dimensions and complexity of a very tight and well worked out design could not all have been developed from scratch in one day. Jeanneret virtually stole the design from Chapallaz, with the developer's connivance. When Le Corbusier died, in 1965, and newspapers published the designs as his, Chapallaz filed a lawyer's certified statement. "There seems little doubt," as Brooks summarizes the evidence, "that, except for one or perhaps both facades, the plans, sections, and the structural system represent Chapallaz's 'intellectual property.'"

Jeanneret's unprofessional behavior is regrettable, but not that uncommon today, even among the best architects. They appropriate jobs from each other, if the developer or client urges them to do this, knowing there are no clear ethical guidelines in a capitalist marketplace. After all, the customer is right, the owner is the final

81. La Roche-Jeanneret House, Paris, 1923-25, first and second floors superimposed and redrawn. The plan shows the tight site, facing north, making it necessary to grab light from various small slots of space, and the dramatization of movement along a route, using bridges, balconies, stairs, and ramps.



82. Facade analysis, redrawn and edited, showing regulating lines. A, B, and C are proportioned elements, and lines parallel or perpendicular make them so.





93. *Salon d'Automne, 1929*, designed with Charlotte Perriand. Storage walls of chrome, glass, metal, and back-of-kneelers plastic divide up the space and contain the "cluster" of positions.

those loyal friends whom Le Corbusier characterized with such key words as "brave-type," "solide," "costaud" (his passion for classification knew no bounds).

The work on the "equipment" started in 1927 and culminated in an exhibition room designed for the Salon d'Automne in 1929 (fig. 93).

As in all his work, Le Corbusier starts from basic functional requirements that he takes to be constant and universal. In this case they are the basic postures of the human body and basic, daily activities such as reading, talking, and reclining. From these requirements, or "object-members," he derives the "object-types" or "standards": the easy chair for reading and relaxing; the "basculant," a reworking of the British Officer's chair, for active discussions and "demonstrating a thesis"; and the form-fitting *chaise longue* for reclining (fig. 94). Not surprisingly, these three chairs are modern versions of older prototypes. Since the intention was to find the standard and perfect it, this was to be expected. It is interesting to see how Perriand and Le Corbusier have extended the inherent metaphors of each prototype.



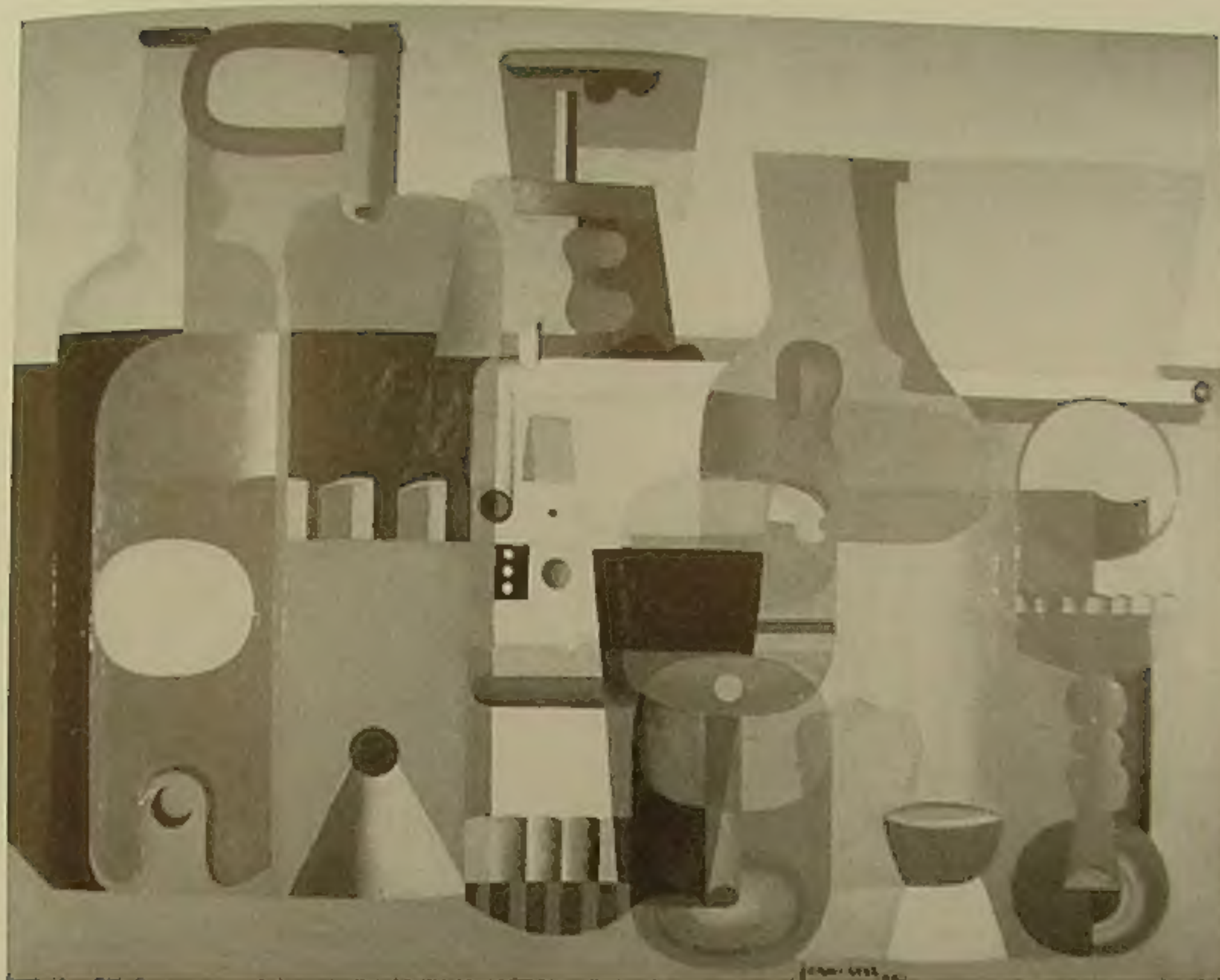
94 a, b, c. Three chairs, 1927-29, with Charlotte Perriand. *Grand confort*, *chaise longue*, and *basculant* are still in production.

For instance, the traditional easy chair of the club and the gentleman's library, the *grand confort*, becomes more heavy, plushy, squashy, and rotund. It has five bulging, black, rectangular cushions squeezed up by thin glistening chromium tubes. These tubes embrace, even pinch, the cushions, offering them up to the human bottom as the essence of "grand confort." The *basculant*, with its pivoting backrest, is as taut as a bow, in fact its leather armrests are strung tightly by springs. The basic division, as in all the chairs, between heavy structure and body support is kept, with the former being articulated in chrome tubes, the latter in calf skin. Visually and conceptually we have a basic separation of functions. The overall feeling is of delicate fur being suspended within a frame of precise machinery, "a chair is a machine for sitting in" being Le Corbusier's explicit metaphor. In fact, this particular machine can be physically painful if one makes the wrong move and activates the pivoting backrest. On the other hand, the *chaise longue* is very comfortable, being molded in shape to the reclining posture. The softened Z shape, a very sculptural form which gives a feeling of embrace, is underlined by the continuous flowing line of the chromium tube, a reworking in metal of effects previously obtained in bentwood. Because this Z shape is further supported at four points by a substructure, the metaphor becomes one of offering up the reclining body for sacrifice or display. It is as if the body is being propped up on fingertips like a precious jewel. The ostensible function of the substructure is to allow for different reclining positions.

In the case of the standard storage wall, the intention has been to provide a thick movable partition which tucks in section so that it can be used from both sides and so that it can liberate the house from clutter—rather like Japanese storage space built from screens. In the "Manual of the Dwelling," 1923, Le Corbusier states his case for cleanliness and purification with a pugilistic kind of irony.

Demand bare walls in your bedroom, your living room and your dining room. Built-in fittings to take the place of much of the furniture which is expensive to buy, takes up much room and needs looking after. . . .

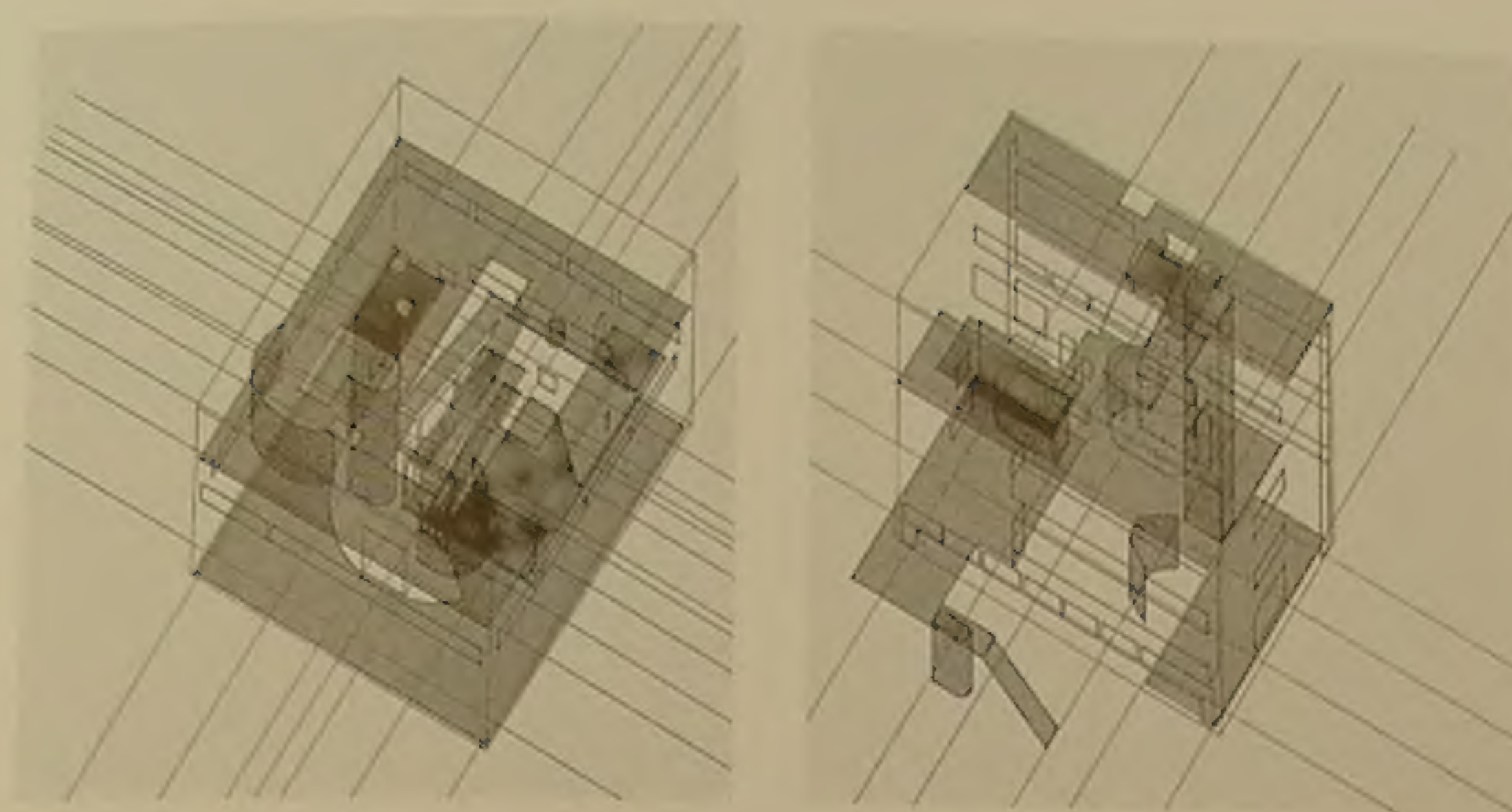
Demand concealed or diffused lighting.



95. *Nature morte de L'Esprit Nouveau*, 1924. Numerous objects superimposed in side elevation and plan like an engineering drawing. The rectangular geometry and regulating lines discipline the whole, giving a very static and calm feeling. These are the "higher," more "intellectual" emotions to which the Purists appealed.

ment where everything is based on the right angle; therefore man has to be a geometrical animal. Photography, cinema, and the press have rendered the need for representational art obsolete: stories can now be told better in other media, while art can concentrate on its own ends of being a pure, *emotional* language. Modern life, with its basis in science, measurement, and exactitude, has created a new superior breed of man, whose reason reigns supreme, who is more complex and intelligent, and who achieves the highest state of development—self-knowledge.

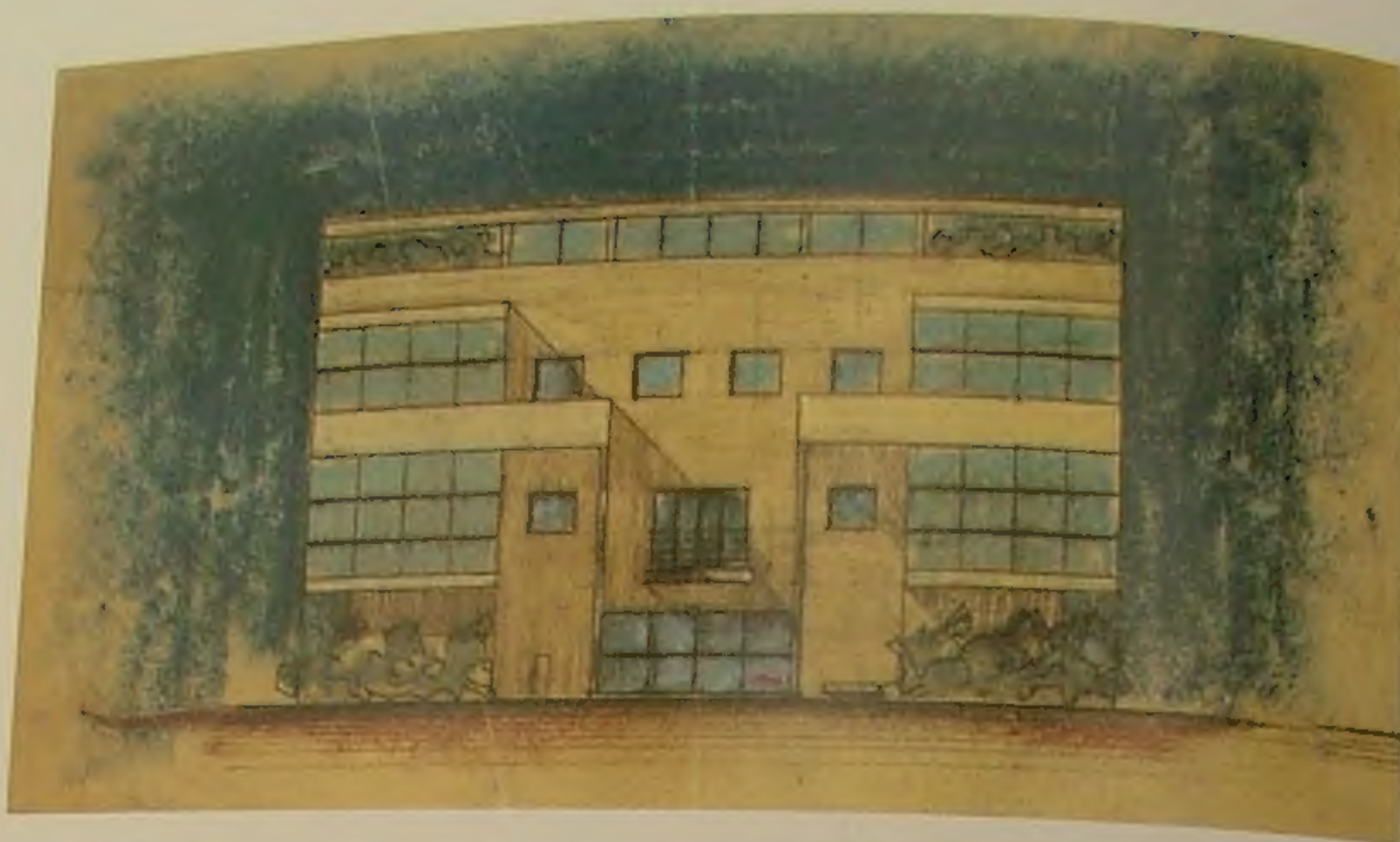
We understand for want of a better word, by *Hieratism*, the state of the mind which a civilization reaches when, leaving the empirical period, it becomes conscious of that which previously it only felt . . . *Hieratism* is the age of knowledge, knowledge of itself, moment of knowledge acquired after a long



97 a, b Schematic analysis of the villas at Garches and Poissy, drawn by Ken Yeang. The nine elements referred to on pages 165–66 are juxtaposed in an abstract grid of space, an example of compaction composition. Diagonal lines show the column grid, the structure, projected onto the four horizons as an ideal cosmic orientation—the ideal square in the case of Poissy. On the front and back Garches shows alternating rhythmical bays with harmonious proportions: 2, 1, 2, 1, 2. Poissy has a steady A, A, A rhythm broken in the middle. As Colin Rowe has shown, both villas have Palladian precedents, but as these two drawings show, the basic ideal geometry is countered by secondary incidents. The idea of these contrasts was first learned by Jeanneret visiting Pompeian houses and then in his Purist paintings. The juxtaposition of geometry and overlapping elements creates his method: compaction composition.

instead of allowing them to be seen through (except in the unique case of glass). Hence when one wanders through a Le Corbusier building one finds a succession of elements partly hidden and partly revealed. This accounts for their excitement and suspense. Le Corbusier once remarked that if a building looked out on a beautiful landscape one should sometimes block the general view so as to make its sudden appearance all the more surprising—a revelation. The monks of La Tourette will conduct the visitor through the building on a preferred path showing all the elements overlapping and changing relationship in a symphony of movement. This is most effective when the elements are pure in form and few in number.

Garches was originally designed for the Steins and Madame Gabrielle de Monzie, who was estranged from her husband. The idealism of the villa consists not only in the way it integrates two families into a unity and perfects a Purist system, but also in the way it addresses nature and technology. For instance, the villa was often called "Les Terrasses" by the architect, and the initial schemes showed an elaborate promenade of walkways punching through walls, looking over trees to catch the best views and dramatize movement. A racetrack at the top was proposed (a bit too ideal for Madame Stein, who vowed she would not even climb the outdoor spiral stair). The drawings show the sun and greenery



118. View of Rio de Janeiro, 1929, watercolor and crayon, 21.5 x 42.5 cm (Collection Ahrenberg, *30). LC paints with watercolors of favelas, and skates, and women, sometimes together and sometimes separate. The rounded mountains of Rio and Santos, particularly fascinated him and are painted in bold parts pushing through the skin of the ground.



sketches suggesting his passion. On the face of it this might be considered unkind, or unfaithful, to Yvonne, to the woman he was to marry the next year, and who is to say it was not both. But considered from his point of view there is a truth to be told, the discovery, rather late in life, of sexual delight seen as a cosmic pleasure, something to be celebrated in poetry, drawing, and architecture. In Josephine he discovers in the human animal "the gods," that vitality which, if transformed through a poetic expression, becomes empowering and innocent.

Sketchbook B4 has a description of a ballet he designs for Josephine:

1. Entrance. 2. Show girls made up with tattoos, sound, one step or pure negro tam-tam without music, only one negro on stage // 1 negro wearing a banana tree // 3. A modern man and woman x New York dancing, only 1 step, holding each other and slowly. 4. The cylinder is lowered, Josephine descends dressed as a monkey. 5. She puts on a modern dress, she sits down. 6. She goes forward onto a podium and sings. 7. She steps off the podium and sings. 8. Last solemn song: the gods rise // in the background the meandering Sea of Santos, and at the end a big ocean liner.

"The gods rise"—they all come together in this ballet of the ocean liner. Josephine was to remain, like the women of Algiers, a spur and muse, a banner of the new activity. Action, direct action, the Syndicalist philosophy of 1930, becomes Le Corbusier's phi-

losophy. Act first, is their message, and see what happens next, where it leads, organically, naturally. What a contrast for the total planner and control-fanatic in him; but, of course, the contradiction becomes just one more example of his internalizing opposites.

There are countless sketches of a Josephine figure in the nude, and a few paintings during the 1930s that monumentalize and turn her into an animal goddess, a mythic figure thus may, as some historians have argued, relate to the prehistoric fertility figures of the Neolithic, perhaps a Moon Goddess. We find several types of woman portrayed: a large figure of the Earth Goddess, or a thin tall figure of the she-goat (*la Licorne*), the fat Arrachon fisherwoman, and the wrestling woman. These are the major characters he portrays, and often they seem to have the hairstyle of Josephine, or her mouth or gesture. Many are sketched or painted from memory, and perhaps in this way he builds up a collective archetype of the feminine symbol.

The Ahrenberg Collection of drawings and graphic work, published as *Le Corbusier Secret*, contains most of the types, and because they are drawn as if they have a liveliness the paintings of women lack. Some, of men and women wrestling, seem to have been sketched from underground Parisian nightlife; the muscular figures are dressed only in boots and anklets. Others show women pleasuring each other (fig. 119). The face, if not the fact, of Josephine seems present here, and one cannot help but see the rolling bodies in a cosmic setting, as miniatures of the meandering

119. Two Women, circa 1930, ink, 27 x 21.3 cm (Collection Ahrenberg, *51). This and other sketches of the same subject incorporate elements of Josephine and the hills of Rio and Santos.



10. A woman lying
enhanced black lead



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Plan Obus A for
The long curve

blocks, while the rest
is a block of
g both European
in cultures in an
artistic synthesis



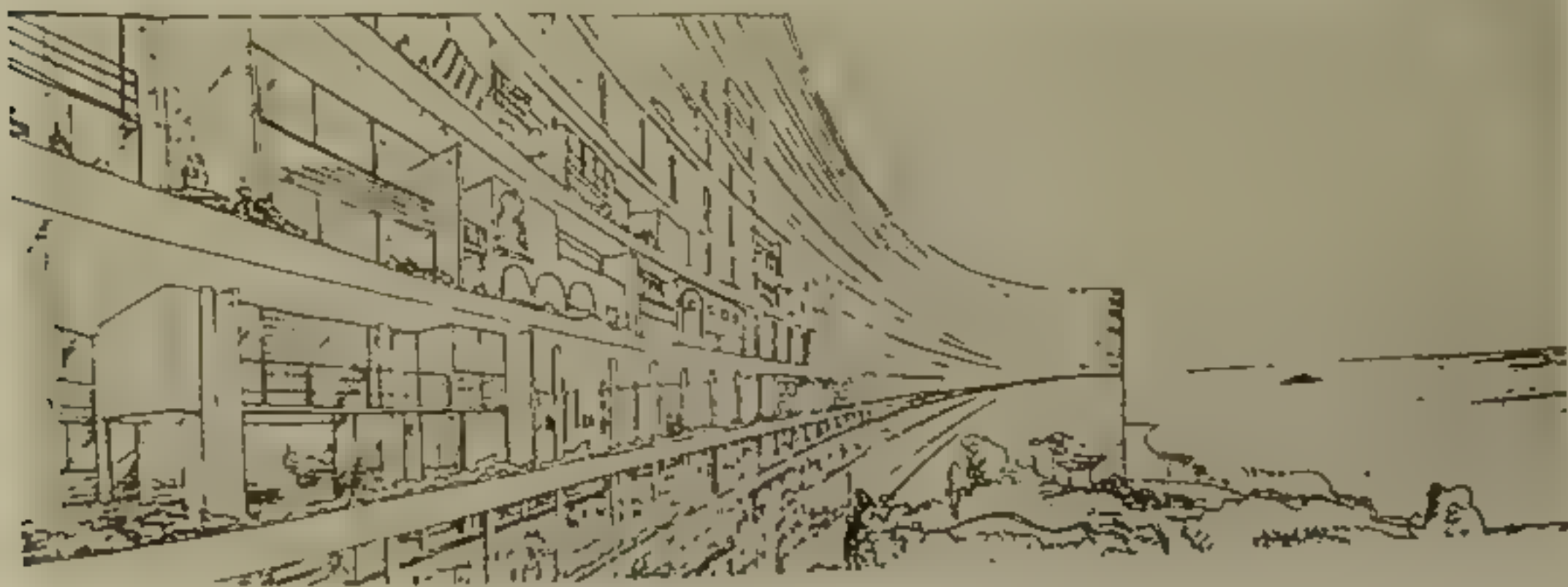
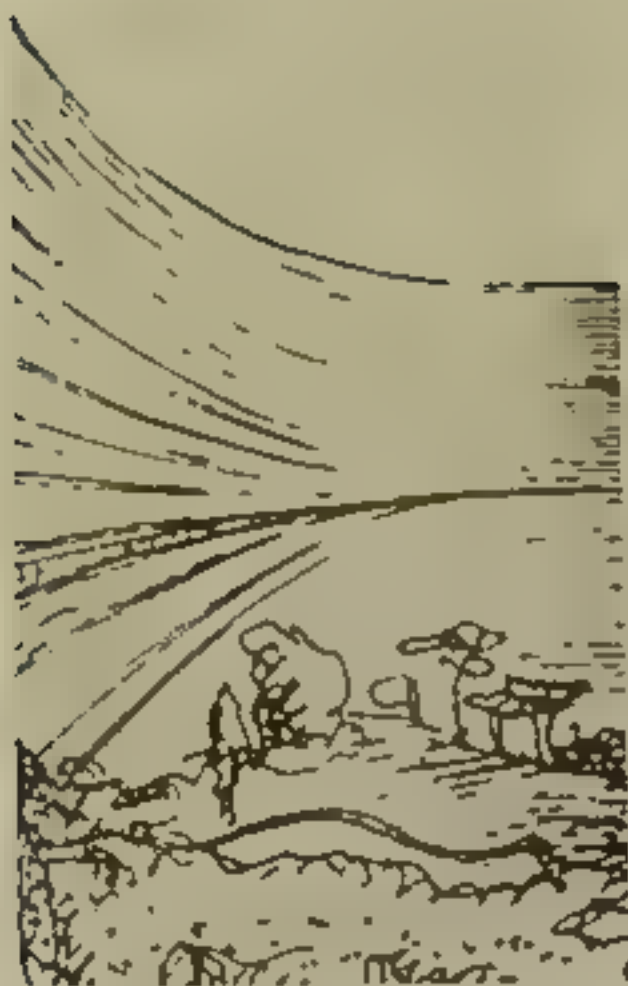
The grammar of the straight line and U-curve, a heavy, bulbous curve, allows the repetition of cellular units. Perhaps this is why his nudes look a bit like buildings. In any case, these forms are incorporated into city plans, particularly for Algiers, where the set-back blocks of 1922 are turned into undulating U-shapes on the hill, twenty-three stories of housing for the wealthy, and a lower snaking curve fourteen stories high for the working class [fig. 121]. This plan, known as Obus ("shell") A, was the first one of six, and by far the most idealistic. In spite of a rather stark class division, it

In the Ford factory, everything is collaboration, unity of views, unity of purpose, a perfect convergence of the totality of gestures and ideas. With us, in building, there is nothing but contradictions, hostilities, dispersions, divergence of views, affirmation of opposed purposes, pawing the ground

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What is odd here is that Le Corbusier can so easily confuse a unified communal effort like harmonious factory work with political participation, or the necessary plurality of views in the public realm. It was this confusion of the smooth-running factory with the good state that was one reason he would soon collaborate with the French Fascists. However, in architectural terms his ideas also lead the other way. The large state construction allows individual participation at the small scale. In his viaduct building, for instance, every individual can build a villa in whatever way he or she wants [fig. 138]. Here public ownership of the artificial sites leads to a great deal of personal freedom at the very small scale. The idea again became current in the 1970s with theorists such as Nicolas Habraken and architects such as SITE. In an unofficial form it was also carried out by the authorities in Asia and India, where vast housing structures were built and then allowed to be inhabited in nonstandard (illegal) ways.

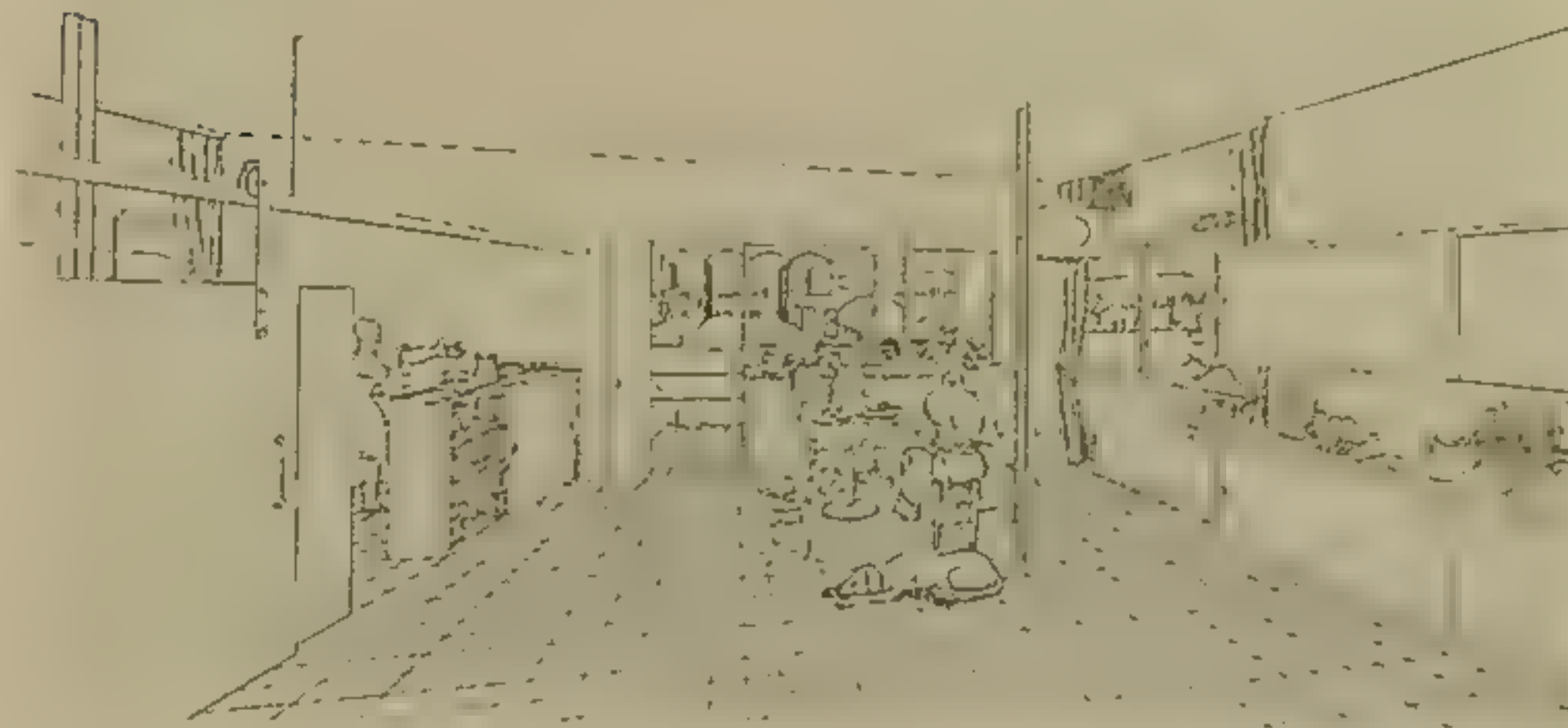
It makes economic as well as social sense to separate the public support system from the private dwelling and let the individual have control over the latter. Here participation can result in a much richer and more responsive environment. What is surprising, given Le Corbusier's interest in participation, workers' unions, the public realm, and such liberal institutions as the



LE CORBUSIER: BUREAU BUILDING, 1928-29

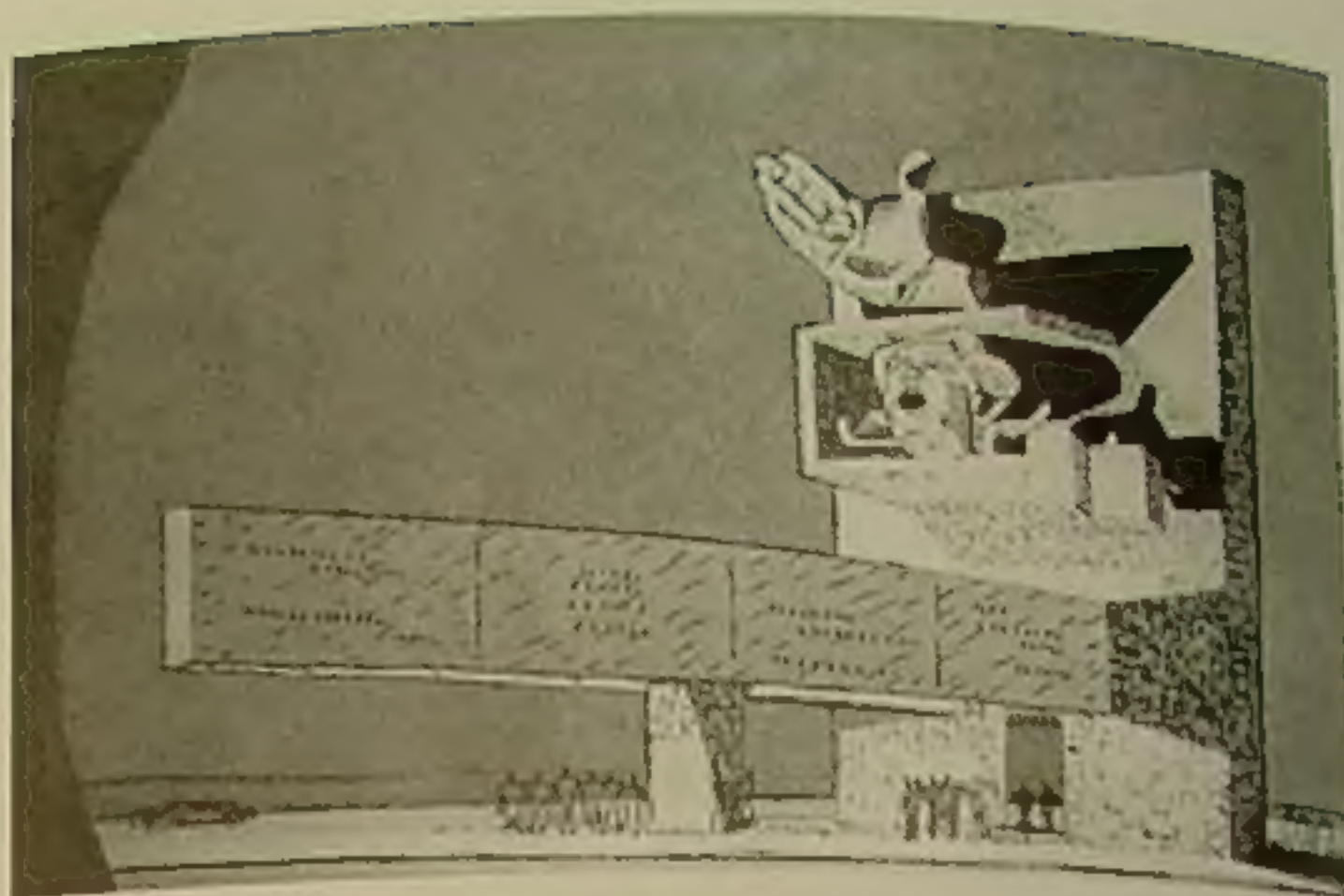
a farm cooperative, meant for a peasant organization in the Sarthe district. LC's design for this Radiant Farm projects an image that is a very touching mixture of peasant life and industrialization [fig. 142]. The farm is mechanized and prefabricated, but the simple, everyday objects of the farmhand are given an exaggerated importance. Perhaps most important of all is the idea of the Cooperative Center, which distributes communal machinery to the farmers and sells their products as well as provides a new element of village life, the communal club. In this proposal one gets the rare glimpse of Le Corbusier's Regional Syndicalism and participation actually resulting in an embodiment of the public realm.

142 The Radiant Farmhouse, 1935
Herculean peasants, visual relatives of the bathers Le Corbusier was painting in the 1930s, listen to a radio cantilevered from an I-beam. Silos and animal sheds are in the background. The good simple life of the farm, propagandized as much by the Americans as the Nazis during the Depression, finds a rare poetic expression.



Le Corbusier: Back to Nature 1928-45

143. Monument to Vaillant-Couturier, 1937. The open hand and expressive mouth of the orator became constant symbols in Le Corbusier's later work. The abstract representation of this work influenced later Post-Modern symbolic buildings and sculpture. Book, hand, mouth are collaged against a cantilevered phallic shape that divides the highway near Fontainebleau.



and the traditional building trades to condemn Modern Architecture because it was supplanting the older forms of building and putting many craftsmen out of work. This economic attack was naturally financed by many of the building trades, and, actually, capitalists. It further confirmed Le Corbusier's suspicion of all moneyed interests whether they were capitalist or socialist. Because of this aggressive stance against special interests, the Communist party of France tried to enlist Le Corbusier in the Popular Front against Fascism. The Civil War in Spain, National Socialism in Germany, and the friendship of Communists such as Fernand Léger and Paul Vaillant-Couturier almost persuaded him to join the Popular Front. But, in the event, all he did was go to their meeting and design a monument for Vaillant-Couturier, who died in 1937 [fig. 143]. Characteristically he turned a political platform into a building program.

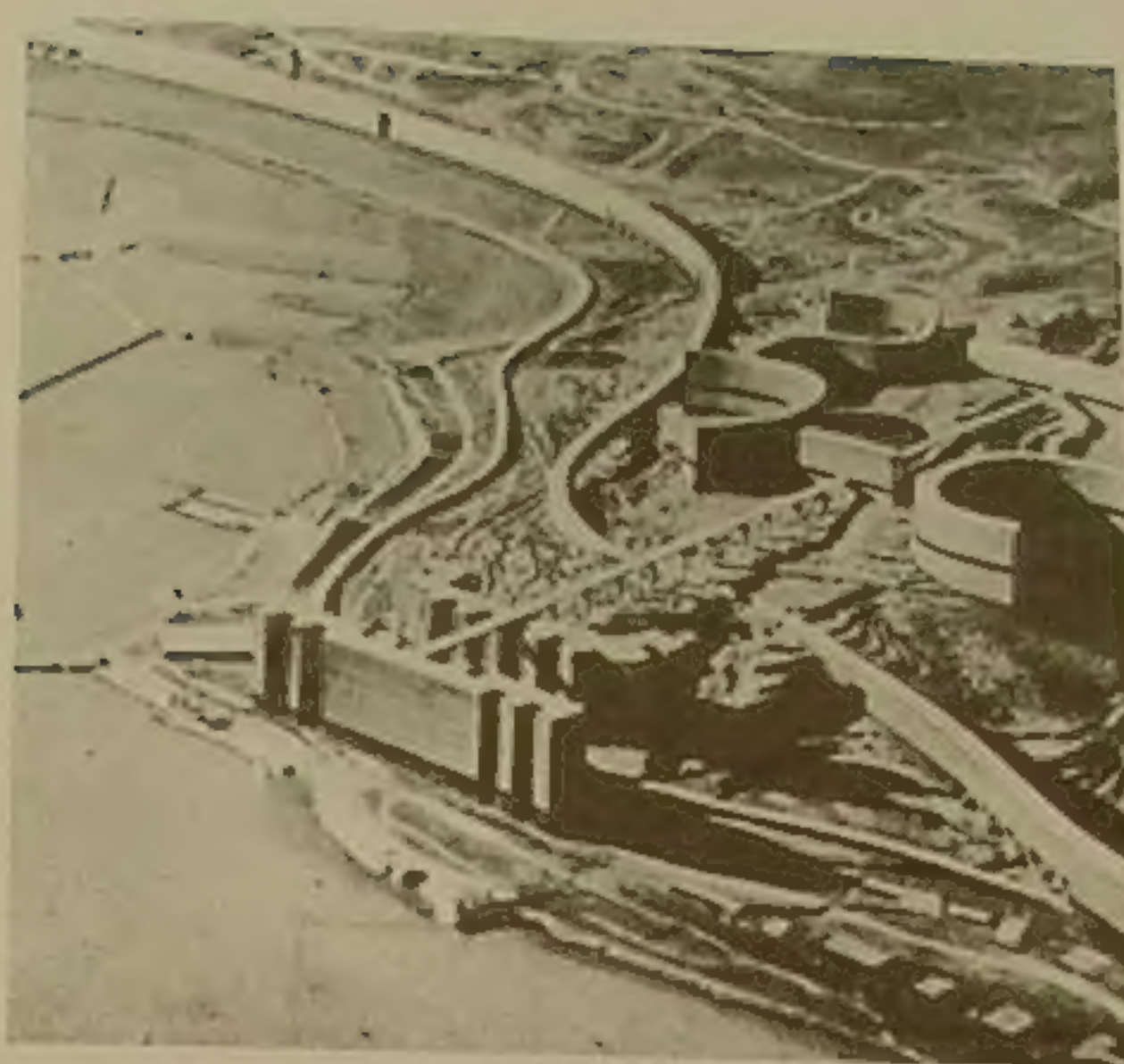


144. RIBA Great Debate, November 1982 (C). My comparison of LC's monument to Michael Graves's Portlandia underscored the importance of abstract representation for his Modernism and later Post-Modernism.

From my point of view, there exists only one way for the Popular Front to demonstrate that something new has begun on the scene of social justice; that would be to construct right now in Paris the elements for habitation which reflect at the same time the latest state of modern technique and your wish to put such things in the service of men.

The monument reflects very aptly the qualities of fighting against social injustice which Le Corbusier found in Vaillant-Couturier. It makes use of conventional motifs present in French

146. Plan Obus A, 1932, enhanced photo. As a close-up reveals, although curvilinear and organic in form, the scale of the imposition is discontinuous with the past, and huge. When LC sent this to the progressive mayor, M. Brunel, he wrote back: "I'm not sure that our present means are capable of realizing [his] goals. . . . I would add that for the requisite authorities to declare the complete destruction of an agglomeration of three hundred thousand inhabitants and its reconstruction. . . . it would be necessary to have an absolute dictator with the property and even the lives of his subjects at his disposal. . . . If my unlucky star were to lead me to this absolute dictator necessary to the execution of your plans, I would not adopt them for the reason that they project the reconstruction of the city on the same site; I would choose another, better, nearby, and it would be easier." In other words, a sympathetic politician could see what LC could not admit and, in effect, predict the compromise nine years later.



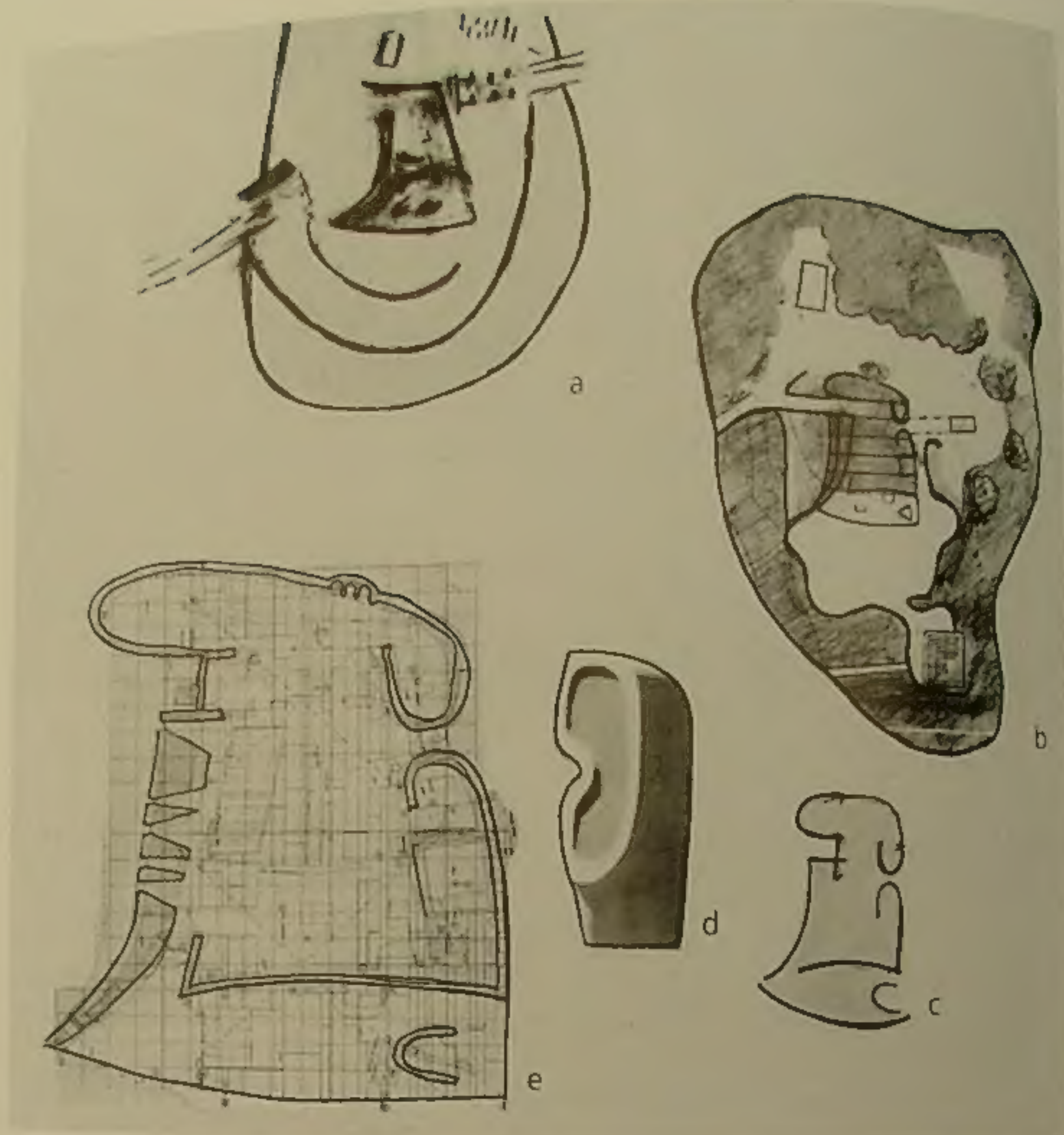
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[fig. 147]. These hybrids, Christopher Green points out, are similar to the antihuman monsters that Picasso produced under Franco. No doubt war, bestiality, and stupidity were spurs to his move into abstraction and its very opposite, the hermetic iconography of nonsense monsters.

The logic was compelling. If humanity had failed, nature itself could become grotesque, and it is rendered as a series of dismembered body parts—giant ears, combined sexual organs, and sculptural blobs that are almost autonomous. The personal crisis can explain a swerve in the painting during the early 1940s, and that, in turn, can be read as a sublimation of his own decision being worked out at the time to collaborate with Vichy. The significance of this shift into biomorphic, zany, and nonhuman symbolism is extremely important for several reasons. Negatively, it shows the way his private creations and private world compensate for what he is about to do publicly; positively, it shows an imaginative opening that will be worked out in a new language of sculpture and graphic work. I will return to the positive side, and the secret symbolism, when it surfaces to transform his architecture and, with Ronchamp, open a new avenue of architecture.



147. Ubu No. 4, 1947.



words confirm this quick creative synthesis, although the first sketches open to only two of the four horizons with curves [fig. 166a]. We find the acoustic forms he mentions in *L'Espace indicible*, the parabolic reflectors; the southeast one in particular, with its outdoor altar, is answered by a curved landform meant to embrace the pilgrims when they come for a large open-air service.

Another early sketch shows a curious echo of the underground

